

## Warren Ewens

Information, variances and covariances in evolutionary genetics

### **Abstract:**

The concept of Fisher information is used to discuss aspects of the evolution of a genetic population. It will be shown that this concept is associated with the variance in fitness (in the haploid case) and the additive genetic variance in fitness (in the diploid case), as well as the covariances in fitness between relatives. Connections with the Fundamental Theorem of Natural Selection and optimality principles will also be made."